REMARKS

Claims 1-22 remain pending in the application, with claims 1, 12 and 19-22 being the independent claims. Reconsideration and further examination are respectfully requested.

In the Office Action, claims 1 and 3-22 were rejected under 35 USC § 103(b) over a portion of a publication by Harvard Graphics (Harvard Graphics) in view of U.S. Patent 5,857,462 (Thomas); and claim 2 was rejected under § 103(a) over Harvard Graphics. Withdrawal of these rejections is respectfully requested for the following reasons.

The present invention concerns methods, apparatuses and techniques for displaying data having different statistical significances. Initially, estimated data values, and a calculated measure of statistical significance for each, are obtained. As noted in the Specification, these measures of statistical significance may be, for example, a sensitivity-based or elasticity-based measure (see page 2, lines 7-8; page 23, lines 1-4; and page 24, lines 30-34), a standard deviation, variance, correlation coefficient, and/or any function of the foregoing (see page 26, lines 4-6). Thus, there are, of course, conventional techniques for calculating a measure of statistical significance for one or more estimated data values.

However, one significant difference between the present invention and the prior art is the way in which such statistical significances are communicated to an end user. The present invention displays each of a plurality of estimated data values using a display characteristic that is a function of the data value's statistical significance. Thus, for example, a graph might be produced with each such estimated data value being

displayed at an intensity level that is a function of the statistical significance for that data point. For instance, estimates having a high statistical significance might be displayed more brightly than estimates having a lower statistical significance. In this way, end users often will be able to easily distinguish the more significant points from the less significant points on a displayed (or otherwise provided) graph.

Independent claims 1, 19 and 21 are directed to the display of information, in which one obtains a plurality of estimated data values, together with a calculated measure of statistical significance for each. Then, a graph of such plurality of estimated data values is displayed, with each such estimated data value being displayed at an intensity level that is a function of its calculated measure of statistical significance.

Independent claims 12, 20 and 22 are directed to the display of information, in which one obtains a plurality of estimated data values, together with a calculated measure of statistical significance for each. Then, a graph of such plurality of estimated data values is displayed, with a display characteristic of each being a function of its calculated measure of statistical significance.

The foregoing combinations of features are not believed to be disclosed or suggested by the applied art. In particular, the applied art does not appear to disclose or to suggest at least the feature of displaying a graph of a plurality of estimated data values, with a display characteristic of each such estimated data value being a function of a measure of statistical significance calculated for it.

In this regard, the Office Action has cited a combination of Harvard Graphics, which appears to concern a software program for generating charts and graphs, and Thomas, which concerns wavelength selection for multivariate spectral analysis. These

references are from two significantly different areas of technology and, as will become apparent below, this observation is important with respect to motivation to combine. Initially, however, the following discussion will focus on the individual references.

The Office Action cites Harvard Graphics page 11-33, which illustrates a bar graph having a pair of bars for each calendar year covered by the graph. Each such pair includes a bar indicating the actual sales volume for the year and a bar indicating the projected sales volume for the year, with all of the "actual" bars displayed in one intensity and all of the "projected" bars displayed in another.

As acknowledged in the Office Action, Harvard Graphics does not say anything at all about obtaining a calculated measure of statistical significance for any of the displayed values, much less having any display characteristic be a function of such a measure. Rather, in Harvard Graphics each bar is only a function of: the year to which the corresponding data value applies (which is represented by horizontal position), the data value itself, i.e., a dollar amount of sales volume (which is represented by the height of the bar), and whether the data value is the actual sales volume for the year or the projected sales volume for the year (which is represented by intensity and also by relative horizontal position, with the projected value to the left of the actual value for each calendar year).

In order to make up for this deficiency in Harvard Graphics, the Office Action refers to Thomas and asserts that it would have been obvious to combine the teachings of Harvard Graphics and Thomas to provide the present invention. More specifically, the Office Action asserts that Thomas teaches a step of obtaining a calculated measure of statistical significance for each of a plurality of data values. The specific portion of

Thomas cited in the Office Action (column 15 lines 26-61) has been studied in particular detail, and is not seen to say anything about obtaining a calculated measure of statistical significance. Rather, as noted in the Office Action, that portion of Thomas instead discloses a technique for determining one or more unknown values of a known characteristic based on a set of samples with known values for that characteristic. Nevertheless, irrespective of whether or not Thomas actually teaches such a step, Applicants agree that the mere calculation of a measure of statistical significance for each of plural data values is clearly conventional.

For purposes of the present rejection, however, the real question is whether Harvard Graphics, Thomas, or any combination of the two would have suggested the present invention's display technique of: displaying a graph of a plurality of estimated data values, with a display characteristic of each such estimated data value being a function of a measure of statistical significance calculated for it.

As to this question, while Harvard Graphics' bars pertaining to the "actual" data are displayed at a different intensity level than the bars pertaining to the "projected" data, nothing in Harvard Graphics appears to suggest that such actual and projected data have associated with them any calculated measure of statistical significance. Similarly, nothing in Harvard Graphics appears to suggest displaying data differently based upon their different calculated measures of statistical significance. In fact, as noted in the Office Action, Harvard Graphics does not even suggest obtaining a calculated measure of statistical significance. Accordingly, Harvard Graphics alone could not possibly have suggested displaying data differently based upon such a calculated measure.

Similarly, Thomas alone also does not appear to say anything about displaying data differently based upon a calculated measure of statistical significance. In fact, the only portion of Thomas cited in the Office Action (column 15 lines 26-61) is not understood to say anything about either statistical significance (see comments above) or data display. The latter has not even been asserted in the Office Action. Accordingly, Thomas alone also could not possibly have suggested displaying data differently based upon different calculated measures of statistical significance.

For similar reasons, there would have been no motivation to combine Harvard Graphics and Thomas as suggested in the Office Action. That is, there appears to be no suggestion in Harvard Graphics to utilize its display techniques in any manner in connection with a calculated measure of statistical significance. In addition, there appears to be no suggestion in Thomas to modify a display such as is shown on page 11-33 of Harvard Graphics so that, for example, the intensity of each bar is based on a calculated measure of statistical significance for the corresponding data value, rather than whether the data value is an actual or projected data value.

In the Office Action, it was asserted that it would have been obvious to combine these two significantly different references "to determine the known characteristics, for use by an algorithm wherein the selection of wavelength subsets improves the model's fitness of the determination for the unknown values of the known characteristics see for example the abstract." As to this statement, it is unclear: (i) what this statement means in the context of the present invention, (ii) how the stated objective relates to the two cited references, or (iii) how such a statement (if true) would have motivated one of

ordinary skill in the art to have combined Harvard Graphics and Thomas in order to provide the present invention.

To the contrary, Harvard Graphics and Thomas are significantly different references, concerning significantly different technology, and nothing in either one appears to suggest the desirability of incorporating or combining the teachings of the other. With regard to motivation to combine prior art teachings, the Federal Circuit has held as follows:

> "This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." [citation omitted]

In re Lee, 277 F.3d 1338, 1343-44 (2002). In the present case, the only motivation to combine the subject references in any manner would have been found in Applicants' own disclosure, which of course is improper.

In addition, even if one attempted to combine Harvard Graphics and Thomas, such a combination still would not have resulted in the present invention because such references, both singly and in combination, lack any teaching with respect to the above-referenced feature of the invention.

In view of the foregoing remarks, independent claims 1, 12 and 19-22 are believed to be allowable over the applied art. The other claims in the application depend from these independent claims and are therefore believed to be allowable for at least the same reasons. In addition, each such dependent claim recites a further feature of the invention that further distinguishes the invention from the applied art.

Accordingly, the individual reconsideration of each on its own merits, particularly in view of the foregoing comments, is respectfully requested.

If there are any fees due in connection with the filing of this paper that have not been accounted for in this paper or the accompanying papers, please charge the fees to our Deposit Account No. 13-3735. If an extension of time under 37 C.F.R. 1.136 is required for the filing of this paper and is not accounted for in this paper or the accompanying papers, such an extension is requested and the fee (or any underpayment thereof) should also be charged to our Deposit Account. A duplicate copy of this page is enclosed for that purpose.

Respectfully submitted,

MITCHELL, SILBERBERG & KNUPP LLP

Dated: December 11, 2003

By _____
Joseph G. Swan
Registration No. 41,338

MITCHELL, SILBERBERG & KNUPP LLP
11377 West Olympic Boulevard
Los Angeles, California 90064
Telephone: (310) 312-2000
Facsimile: (310) 312-3100